RECEIVED
CENTRAL FAX CENTER
AUG 0 8 2006

IN THE CLAIMS

The following listing of claims will replace all prior listings or versions of claims in the application:

1. (Currently Amended) A RGB to YUV video filter, comprising:
a lumina filter path coupled to receive blocks of RGB formatted data and generate a block of lumina data, wherein the lumina filter path includes ~~an~~ a first interpolation filter and a RGB to Y conversion; and
a chroma filter path coupled to receive the blocks of RGB formatted data and generate blocks of chroma data,
wherein the lumina filter path and the chroma filter path are separate and operate in parallel.

2-30 (Canceled)

31. (New) The filter of claim 1, wherein the chroma filter path includes a RGB to UV conversion, and wherein a Y data output of the RGB to Y conversion comprises more pixels than at least one of a U data output of the RGB to UV conversion and a V data output of the RGB to UV conversion.

32. (New) The filter of claim 1, wherein the chroma filter path includes a second interpolation filter.

33. (New) The filter of claim 32, wherein the second interpolation filter provides more moire rejection than the first interpolation filter.

34. (New) The filter of claim 32, wherein the second interpolation filter suppresses aliasing more than the first interpolation filter.

35. (New) The filter of claim 34, wherein the first interpolation filter includes a M-tap filter, wherein the second interpolation filter includes a K-tap filter, and wherein M is less than K.

36. (New) The filter of claim 35, wherein M is not greater than 5, and wherein K is not less than 7.

37. (New) The filter of claim 35, wherein the first interpolation filter includes a M-tap horizontal filter and a M-tap vertical filter, and wherein the second interpolation filter includes a K-tap horizontal filter and a K-tap vertical filter.

38. (New) The filter of claim 1, wherein the lumina filter path further includes a first gamma correction, and wherein the chroma filter path includes a second gamma correction.

39. (New) The filter of claim 38, wherein the first gamma correction corrects Y data but does not correct red plane data, green plane data, or blue plane data.

40. (New) The filter of claim 39, wherein the chroma filter path further includes a second interpolation filter, and wherein the second gamma correction independently corrects each of red plane data, blue plane data, and green plane data generated by the second interpolation filter.

41. (New) The filter of claim 1, wherein the lumina filter path further includes an edge enhancement filter to enhance the Y data, and wherein the chroma filter path does not include an edge enhancement filter.

42. (New) The filter of claim 41, wherein the lumina filter path further includes a spatial filter to further enhance edge effects of the Y data, wherein the spatial filter includes a plurality of distinct edge detection masks, and wherein the chroma filter path does not include a spatial filter to enhance edge effects.

43. (New) The filter of claim 42, wherein the chroma filter path includes a color correction filter, and wherein the lumina filter path does not include a color correction filter.

44. (New) The filter of claim 44, wherein the chroma filter path includes a core color filter configured such that a sum of a square of a U value of a pixel and a square of a V value of the pixel exceeds a predetermined threshold, and wherein the lumina path does not include a core color filter.

45. (New) A method of converting RGB data to YUV data, comprising:
receiving RGB data;
interpolating first color plane data from the RGB data;
interpolating second color plane data from the RGB data;
generating Y data from the first color plane data but not from the second color plane data;
generating UV data from the second color plane data but not from the first color plane data; and
combining the Y data and the UV data.

46. (New) The method of claim 45, wherein the first color plane data is interpolated by 5-tap filtering, and wherein the second color plane data is interpolated by 7-tap filtering.

47. (New) The method of claim 45, further comprising:
performing a first gamma correction on the Y data; and
enhancing an edge feature of the Y data.

48. (New) The method of claim 47, further comprising performing spatial filtering of the Y data.

49. (New) The method of claim 47, wherein the second color plane data includes red plane data, blue plane data, and green plane data, and further comprising:

performing a second gamma correction on the red plane data;

performing a third gamma correction on the blue plane data; and

performing a fourth gamma correction on the green plane data, wherein each of the first gamma correction, the second gamma correction, the third gamma correction, and the fourth gamma correction are performed independently.

50. (New) The method of claim 45, further comprising downsampling the second color plane data but not downsampling the first color plane data.

51. (New) The method of claim 50, wherein the downsampled second color plane data is converted to the UV data.

52. (New) An image processing module, comprising:

an input to receive a RGB data signal; and

an output to provide a YUV data signal corresponding to the RGB data signal,

wherein the YUV data signal includes Y data derived from a first interpolation of the RGB data, wherein the first interpolation utilizes a M-tap filter,

wherein the YUV data signal further includes UV data derived from a second interpolation of the RGB data, wherein the second interpolation utilizes a K-tap filter, and

wherein M is less than K.

53. (New) The image processor of claim 52, wherein the UV data is converted from downsampled color plane data generated by the second interpolation.

54. (New) The image processor of claim 52, wherein the Y data has been gamma corrected only after the first interpolation.

55. (New) A processor readable medium embodying executable instructions, the executable instructions comprising:

instructions to generate first color plane data from RGB data, wherein the first color plane data includes first red data, first blue data, and first green data;

instructions to generate second color plane data from the RGB data, wherein the second color plane data includes second red data, second blue data, and second green data;

instructions to generate Y data from the first color plane data;

instructions to generate UV data from the second color plane data; and

instructions to combine the Y data and the UV data into YUV data.

56. (New) The medium of claim 55, wherein the first color plane data represents more pixels than the second color plane data.

57. (New) The medium of claim 55, wherein the instructions to generate the Y data from the first color plane data include:

instructions to convert the first color plane data into Y data;

instructions to perform a gamma correction on the Y data;

instructions to detect an edge feature of the Y data;

instructions to enhance the edge feature; and

instructions to detect a corner feature of the Y data; and

instructions to enhance the corner feature.

58. (New) The medium of claim 56, wherein the instructions to generate the UV data from the second color plane data include instructions to generate third color plane data, wherein a pixel value of the third color plane data is determined by mixing a corresponding red pixel value, a corresponding blue pixel value, and a corresponding green pixel value of the second color plane.

59. (New) The medium of claim 58, wherein the instructions to generate the UV data further include instructions to convert downsampled third color plane data into UV data.